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- (71) Applicant (*for all designated States except US*): UNIVERSITY OF WARWICK [GB/GB]; Gibbet Hill Road, Coventry CV4 7AL (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): DALE, Nicholas, Egerton [GB/GB]; c/o Department of Biological Sciences, University of Warwick, Gibbet Hill Road, Coventry CV4 7AL (GB). LLAUDET, Enrique [ES/GB]; c/o Department of Biological Sciences, University of Warwick, Gibbet Hill Road, Coventry CV4 7AL (GB). DRONIOU, Magali [FR/GB]; c/o Department of Biological Sciences,
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(57) **Abstract:** Method of Producing Sol-gels and Sol-gel Biosensors. The invention discloses a method of producing a layer of sol-gel on a substrate comprising the steps of: (a) providing a acidified sol suspension; (b) at least partially neutralising the acidified sol suspension to form a neutralised sol suspension; (c) contacting an electrically conductive surface with the neutralised sol suspension; and (d) applying an electrical potential to the electrically conductive surface to cause a layer of sol-gel to form on the surface of the electrically conductive surface. Preferably, the neutralised sol-gel has a biological material, such as an enzyme added. Biosensors obtained by using the method are also provided.

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